

The Examiner asserts that Ouderkirk teaches a birefringent film, and that Hiji teaches a conventional liquid crystal display structure with a light diffusing plate formed on a polarizing plate. From this, the Examiner leaps to the unwarranted conclusion that Applicants' claim 1 is not patentable. However, the Examiner's interpretation of the teachings in these references is mistaken.

Although Ouderkirk teaches a birefringent film, he discloses that his invention "relates to control of specific polarizations of reflected or transmitted light."<sup>1</sup> Further, Ouderkirk describes that the film is particularly useful as a polarizer, including either diffuse polarizers or a reflective polarizers.<sup>2</sup> That is, Ouderkirk's film exhibits properties of both a polarizer and a diffuser.

Accordingly, because Ouderkirk's film exhibits both polarizing and diffusing characteristics, there is no motivation to combine such a film with either another polarizer or another diffuser as suggested by the Examiner. That is, the Examiner asserts that from the teachings of Hiji, it is known that an LCD includes a light diffusing plate formed on a polarizing plate. However, one of ordinary skill in the art—looking at the teachings of the references as a whole—would have thought to replace both Hiji's polarizing plate and diffusing plate with Ouderkirk's one film that performs both functions. Alternatively, because Ouderkirk teaches that his film is a polarizer, one of ordinary skill in the art might have thought to replace Hiji's polarizer with Ouderkirk's film. However, in such a case, the resulting combination would not then include a diffusing plate comprising a birefringent film.

In any case, any combination of Ouderkirk and Hiji would not result in an optical element comprising a polarizing plate and a light diffusing plate laminated on the polarizing plate, wherein the light diffusing plate comprises a birefringent film, as set forth in claim 1.

With respect to claim 2, there is no motivation to modify Ouderkirk as suggested by the Examiner. That is, the Examiner asserts that the chemical composition of the thermoplastic

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<sup>1</sup> Ouderkirk at col. 1, lines 9-11.

<sup>2</sup> Ouderkirk at: col. 4, lines 10-15, 31-33, and 48-50; col. 8, lines 41-45; and col. 20, lines 19-22.

liquid crystal polymer is “well known and obvious for showing liquid crystal characteristics”.<sup>3</sup> However, a statement that modifications of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made”, because the references relied upon teach that all aspects of the claimed invention were individually known in the art, is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). Here, the Examiner asserts that because liquid crystal polymers are well known, it would have been obvious to use such a material in Ouderkirk. However, the Examiner provides no motivation for doing so and, therefore, has failed to establish *prima facie* obviousness of Applicants’ claims.

Each one of claims 3 and 4 sets forth a light diffusing plate comprising a birefringent film containing dispersed therein minute regions differing from the birefringent film in birefringent characteristics, wherein a difference in refractive index between the birefringent film and the minute regions in a direction perpendicular to an axis direction in which a linearly polarized light has a maximum transmittance,  $\Delta n^1$ , is 0.03 or larger, and further wherein the minute regions are dispersedly contained in the birefringent film by phase separation and each has a length in the  $\Delta n^1$  direction of from 0.05 to 500  $\mu\text{m}$ .

In contrast to that in each of claims 3 and 4, Ouderkirk fails to teach or suggest Applicants’ claimed length of the particles in the  $\Delta n^1$  direction of from .05 to 500  $\mu\text{m}$ . Instead, Ouderkirk discloses that the length of the particles is greater than the wavelength of electromagnetic radiation of interest divided by 30, and that through the specification the wavelength of interest is that of the visible spectrum. See: col. 9, lines 28-67; and col. 15, lines 1-7. Accordingly, because the wavelength of the visible spectrum ranges from .430  $\mu\text{m}$  to .690  $\mu\text{m}$ , the length of Ouderkirk’s particles is greater than .0143 to .0231  $\mu\text{m}$ . But Ouderkirk does not disclose an upper limit on the length of the particles. Accordingly, Ouderkirk’s range of particle length overlaps that set forth in each of claims 3 and 4.

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<sup>3</sup> Office Action at page 2, last 4 lines.

But Applicants have disclosed the importance of their claimed range. That is, as set forth on page 15, line 13 to page 16, line 10, the claimed range is the result of balance between achieving backward scattering and diminishing the wavelength dependence of scattered light. That is, in order to induce and enhance backward scattering, it is preferred to regulate the  $\Delta n^1$  direction diameter of the minute regions to a size which causes Rayleigh scattering, that is, to a size sufficiently smaller than the wavelengths of the light to be used. On the other hand, in order to diminish the wavelength dependence of scattered light, the  $\Delta n^1$  direction size of the minute regions is preferably as large as possible. Accordingly, the claimed range represents a tradeoff in these considerations.

And a *prima facie* case of obviousness based on overlapping ranges can be overcome by showing the criticality of the claimed range. Accordingly, because Applicants have shown the criticality of their claimed range, this rejection should be withdrawn.

Further, however, the Examiner makes the bald assertion that “[t]he range claimed by Applicant for the length of the dispersed liquid crystal polymer particles is very broad and virtually non-limiting. The length of conventional liquid crystal polymer particles is well within this range.” It thus appears that the Examiner tries to take official notice of the length of the liquid polymer crystals. Accordingly, Applicants respectfully request that the Examiner come forward with evidence to support this assertion. That is, an Examiner may not rely on official notice, or judicial notice, or a mere statement of obviousness at the exact point where patentable novelty is argued, but must come forward with pertinent prior art. See *Ex parte Cady*, 148 U.S.P.Q. 162 (Bd. of App. 1965).

For at least any of the above reasons, Ouderkirk and Hiji fail to render obvious claims 1-4. Likewise, these references fail to render obvious dependent claims 5-10.

### **Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

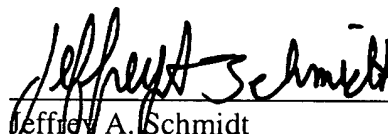
Amendment Under 37 C.F.R. § 1.111  
U.S. Appln No. 09/469,162

Atty. Dkt No. Q57339

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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